The Cary Arboretum

of The New York Botanical Garden

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In This Issue:

Sun Day Tours of Solar-Heated Building
Music at the Arboretum
Colors Flourish at Wildlife Lab
Around the Arboretum

Sun Day Tours of Solar-Heated Building

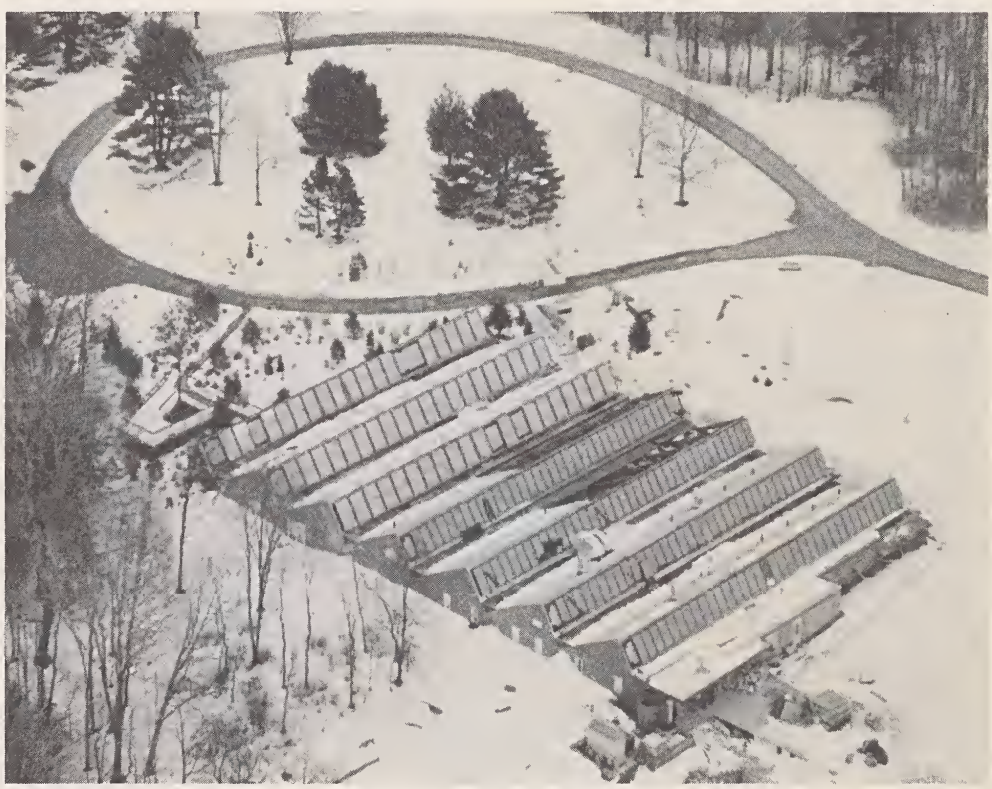
The Arboretum will observe Sun Day, the national day dedicated to solar energy, by opening the doors of its solar-heated Plant Science Building for public previews.

There will be free tours on two days – Saturday, April 29, during the weekend that precedes the national solar observance, and Wednesday, May 3, which has been designated as "Sun Day." Hours of the tours will be 10:00 a.m. to 4:00 p.m. on both days. Arboretum staff members and volunteers will be available to explain the unusual energy-saving systems in the building.

The Plant Science Building, which has been designed to derive about 85 percent of its heating requirements from the sun, is in the final stages of construction and interior furnishing.

During the winter, steel beams were substituted for wooden beams supporting

(continued on page 4)



Plant Science Building – A Winter View. Photographer Gary Griffen flew over the building in February to take this shot, from the southwest side, showing the south-facing solar collectors on the seven roof surfaces, and the driveway circle beyond.

Music at the Arboretum

The Hudson Valley Philharmonic Orchestra is coming to the Cary Arboretum!

Arrangements have been made for a series of four outdoor concerts on Sunday afternoons in May, June, and July. Exact dates, program details, and ticket prices will be announced by mail and through the media soon and will be published in our next Newsletter.

The concert series "Music at the Arboretum" brings the highly acclaimed Hudson Valley Philharmonic to this part of Dutchess County for the first time – and in a beautiful natural setting.

The initial performance, presenting a 20-piece ensemble from the HVP Orchestra, will take place on a sloping meadow that forms a natural bowl behind the Gifford House Education and Visitors Center on Sharon Turnpike. Imre Pallo will conduct.

The three remaining concerts, involving smaller instrumental groups, will take place in the Gifford House garden. The groups scheduled to play for these three concerts are the Renart Trio (cello, violin, and piano), Filagree Chamber Group (harp, flute, and viola or cello), and the Hudson Valley Brass Quintet (two trumpets, French horn, trombone, and tuba).

Members of Friends of the Cary Arboretum will be entitled to ticket discounts. Refreshments will be served after each concert.

Arrangements were worked out by Dr. Willard W. Payne, Director of the Cary Arboretum, and Darrell Edwards, Orchestra Manager of the Hudson Valley Philharmonic.

Colors Flourish at Wildlife Lab

Text and photographs by Robin Parow

"Blue hasn't been seen since last week . . . Hey!, Yellow/Black was in the trap again this morning!"

It's not unusual to walk into the Cary Arboretum's Wildlife Lab and overhear an effervescent conversation in which 20 different colors may be mentioned.

The "color scheme" at the lab is a very unique and so far successful one. Out of approximately 120 resident deer on the Arboretum grounds, 41 have been captured, evaluated, tagged, and given a durable vinyl/nylon collar or streamer individually naming the animal by color before the animal is released. The deer can then be easily identified in the field by the Wildlife staff and volunteers, who carefully keep a file on each color-coded animal.

Cary's female deer don neck-bands of solid colors, color combinations, and a checkerboard style which may just be a new trend in collar fashion. The male deer, however, are unable to wear collars because of neck swelling which occurs in the fall. They are therefore tagged with 3-inch wide and 12-inch long colored streamers.

The purpose of this woodland "fashion parade" is to compile information about the the deer population on the Arboretum's 2,000-acre grounds. The data are used by Arboretum horticulturists to plan location of future plantings of the valuable plant specimens from the Cary collection. In addition, the work with the deer has a broad research objective – to learn more about deer generally, so that findings can be applied by orchardists and others elsewhere, and to add to the storehouse of wildlife science knowledge.

A deer is measured after being recaptured in a box-trap. L to R are Maria Butcher, Jay McAninch, and Harry Cunningham.

"Yellow/Black" poses with Wildlife Department members.

Deer tagging at the Arboretum officially began in September of 1976 with a carry-over of a few deer tagged the year before. Since the start of the program, 54 animals have been individually marked and studied. Current findings show that 13 are known to be dead or lost due to dog kills, hunter kills, and automobile fatalities. The most recent survey indicates that there are now 20 marked females and 21 marked males which will serve to represent the entire Cary deer population. As these tagged specimens are sighted, reports can be compiled to evaluate the movement patterns and home ranges of the deer. Through this monitoring system, Cary researchers have learned what portions of the Arboretum the deer use most frequently for feeding. With this information, Arboretum Wildlife personnel can encourage deer to other use areas of the grounds where there may be less of a threat to valuable plantings.

A great deal of detailed information can be gathered after the recapture of a marked deer. Volunteers and staff members check the apple-baited 4- by 10-foot box traps daily.

When a deer is recaptured, its own personal file is brought out, and notes are taken on the animal's overall stability. Careful attention is given to weight, appearance, protein and cholesterol levels in the blood, and nutritional condition.

One example of a closely watched specimen is a 7-month-old male named "Yellow/Black." He was originally captured January 11 of this year on the extreme north end of the Cary property. Records show that his weight was 38 kilograms or 84 pounds. He was again captured on February 12, weighing 34 kilograms or 74 pounds. This indicates that Yellow/Black has lost 12 percent of his original body weight while surviving the winter. After reviewing his blood sample, it was apparent that Yellow/Black's protein metabolism had dropped considerably and that he was experiencing signs of hunger. If the protein level drops drastically, food can be collected and distributed to the feeding areas, although it isn't unusual to find a loss of up to 20 percent body weight during the winter months, without permanent injury to the deer.

The system of observations plays an important role in the Wildlife Program. Sightings of deer reported to the lab are small pieces in a major wildlife puzzle. By putting all the pieces together, it is possible to determine family organizations, personal characteristics of animals, and physical changes among the group. If it hadn't been for this jigsaw puzzle work, the Arboretum might never have known about "Grandma," a venerable female deer. She is a doe who has been monitored for three years, goes by the more formal name of "Orange," and will be six years old on June first.

Recent activity on the grounds has really picked up. Since January 10, there have been 18 new captures and 27 recaptures.

None of this work could be handled without the experience and dedication of Wildlife Biologist Jay McAninch. His time and ability have formed the backbone of this successful deer-tagging program. He works closely with Maria Butcher and Ray Winchcombe who together form a very capable department, assisted by many volunteers.

Ray also handles the responsibility of the organization of manpower. A schedule must be made, since several people are needed daily to maintain and check traps, along with the issuing of reports of deer sightings. The program's smoothness is attributed to the time and effort of the three diligent

(continued on page 4)

Around the Arboretum

Elias to Visit China

Dr. Thomas S. Elias

Thomas S. Elias, Assistant Director of the Arboretum, has been named as a member of a delegation of ten American botanists who have been invited to visit the People's Republic of China for one month beginning in May. The trip is under the auspices of the Botanical Society of America.

The American delegation will visit botanical gardens and arboreta in many sections of mainland China. Later in the year, ten Chinese botanists will pay a reciprocal visit to the United States. It is very likely that the Cary Arboretum will be on their itinerary.

Other members of the group from the Botanical Society come from Harvard, the Universities of California, Texas, Illinois, Michigan State, and Miami, also the Arnold Arboretum, Boston, Massachusetts, and the National Science Foundation, Washington, D.C.

Dr. Elias initiated an exchange of seeds between the People's Republic of China and the Arboretum in 1974. Subsequently, the Chinese Ambassador to the United Nations visited the Arboretum to see how his country's seeds were being used. Several other seed exchanges with China have occurred since.

Dr. Elias coordinates the international exchange of botanical visits between the United States and the Soviet Union. Under auspices of that program, he visited the U.S.S.R. in 1976, collecting seeds and plant cuttings in the Soviet Caucasus Mountains. Plants grown from this material, together with those grown from the Chinese seed, now constitute a unique part of the Cary Arboretum plant collection.

Cary's "Spring Thing" Coming Soon

Saturday, May 13, will be a day of repotting, spraying, and free plant care consultations at the Arboretum's Greenhouse on Route 82.

The Plant Clinic will be held between 10:00 a.m. and 3:00 p.m. Diseased plants will be sprayed at 50¢ per plant (three plants treated free for members). Repotting (bring your own pot), $1.00 each, up to a 12-inch pot (three plants or one large tub repotted free for members).

The Gifford House will also welcome spring on May 13 with its first annual Spring Plant Sale and the Grand Opening of the Cary Gift Shop from 10:00 a.m. to 6:00 p.m. Plants, gardening items, books, posters, and dozens of unusual gifts will be on sale with volunteers from the Nine Partners Garden Club of Millbrook serving behind the counters. A 10 percent discount will be given to Friends of the Cary Arboretum.

Memorial to Clayton Linde

The Arboretum has received a contribution to the Cary Arboretum Fern Glen, as a memorial to the late Clayton Linde. The donors were Ruth and George Hack, Peg and Phil Marino, Jan and Henry Graham, and Doris Waltz.

It was through the good offices of Clayton's father, Edward L. Linde, that IBM last year made a Community Service Grant to the Arboretum to assist with development of the Fern Glen.

In acknowledging the memorial to Clayton Linde, Dr. Willard W. Payne, Arboretum Director, said the contribution to the Fern Glen "is a heartwarming and thoughtful gesture that will contribute to the excellence and use of this facility."

Courses Offered at Arboretum

A variety of courses from Art to Maple Sugaring are being offered this semester at the Cary Arboretum's new Education and Visitor Center at the Gifford House in Millbrook.

The completely renovated Gifford House is located on the Sharon Turnpike approximately one mile north of Route 44, and is the focus for all public programs of the Arboretum.

Some of the courses offered are Basic Nature Study, Rock Gardening, Basic Botany, and the Photographing of Nature. A workshop in Environmental Education is open to junior and senior high school teachers, as well as a special Nature Program for children. Film and slide programs are open to all. These classes will be taught by staff members of the Arboretum along with guest instructors from the area.

Senior citizens and "Friends of the Cary Arboretum" are entitled to discounts on courses in addition to many other benefits. For membership information, contact Ms. Janice Claiborne, Membership Secretary, at 677-5343. Phone 677-5358 for brochure with schedule and course details.

Period Pieces Wanted

The Arboretum's Gift Shop is seeking donations of "period" pieces to be used as working displays in the Shop. The manager of the Shop, Grae English Essig, says she wants to come as close as possible to simulating the decor of the early 1800's, the style of the times when Gifford House, where the Shop is located, was built.

Ms. Essig would like to acquire the following items for the Shop: two looking glasses, one child's desk and chair, one writing table and chair, two easy chairs, one candlestand, one breakfast table, one card table and chairs (square or round), one coat stand, one sideboard or chest of drawers, and a rug approximately twelve feet by fifteen feet.

For further information, please call Grae Essig at the Gifford House, 677-5358.

Grant for Red Pine Cell Culture

The International Paper Company Foundation has awarded a grant to the Cary Arboretum that will be used by Dr. David Karnosky for tissue culture work on red pine. The purpose will be to develop hybrids of these tree species that may be more resistant to disease and exhibit more desirable growth patterns. Red pine is known as a species that until now shows very little genetic variation between individual trees. The IPC grant will support work by a graduate student at Syracuse University, under Dr. Karnosky's direction. The work will be carried out by Dawn Lange, Dr. Karnosky's research assistant.

Tillman Elected to Man and Biosphere Program

Wildlife Ecologist Gus Tillman has recently been named to an advisory committee for the Man and Biosphere Program (MAB), which is part of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Dr. Tillman will be a member of a directorate concentrating on the MAB Engineering Works Project, giving close attention to concerns which arise in a wide variety of engineering applications involving man and his environment.

MAB is derived from the former International Biological Program (IBP), but it differs from IBP in that it is intergovernmental in structure and is oriented towards actual management of problems arising from the interactions between human activities and natural systems.

Silver Beaver Awarded to Dr. Dykeman

Peter Dykeman, Educational Coordinator of the Arboretum, was honored January 21 with a presentation of the Silver Beaver Award from the Dutchess County Council, Boy Scouts of America.

Dr. Dykeman has been actively involved in scouting for over twenty years. His volunteer work has included positions as Cub Master, Assistant Scout Master, District Chairman, and Committee Chairman. He has also worked on the Council Executive Board, as well as the District Health and Safety, and Camping Committees. He is presently an instructor of the Wood Badge adult leadership program and has assisted for several years in the Dutchess County Sustaining Membership Campaign.

We are proud to have such a dedicated, conscientious man on the Cary staff.

Arboretum on Voice of America

A ten-minute discussion of the Cary Arboretum and the New York Botanical Garden was beamed to the Soviet Union on the short-wave radio service, "Voice of

(continued on page 4)

Sun Day Tours of Solar-Heated Building
(continued from page 1)

the seven rows of solar collecting panels on the roof. Also, tests have been conducted of the solar equipment and its back-up system, an electrically operated water chiller that, when run in reverse cycle, supplies auxiliary heat. Despite the severe weather conditions, most of the interior carpentry, painting, plastering, electric and plumbing work was completed. Specially designed furniture is arriving from the manufacturers and is being installed, including desks that contain "task lights" that, to save power, concentrate lighting on a work surface rather than diffusing it throughout a room.

Also during the winter, contractors installed and checked out such features as the window shutters and manually operated skylight covers, which are part of the building's energy-savings systems.

When the wintry weather permitted, outside work was done to hook up the complex piping system that carries hot water from the rooftop collectors to the heating system.

The Sun Day tours of the Plant Science Building have been arranged by the Cary Arboretum in cooperation with the Sun Day Center in New York City, which is operated by a broadly based citizens' committee headed by Lola Redford, wife of the actor Robert Redford.

The public viewing of the Arboretum's building will be one of the major events on the week-long schedule of Sun Day activities in the New York area.

Colors Flourish at Wildlife Lab
(continued from page 2)

Cary staffers, 1 CETA employee, 8 to 10 volunteers, 2 students from Dutchess Community College, and 1 student from the University of Connecticut.

Together, nature and man can provide definite evidence to test and replace what up to now has been only general hypothesis. The success of the Wildlife Program is the first chapter in the book of Environmental Survival.

Around the Arboretum
(continued from page 3)

America," in January. Dr. Thomas S. Elias, who coordinates the international exchange of botanical visits between this country and the U.S.S.R., recorded the program at the Interior Department in Washington. His remarks were translated into Russian by Ms. Raisa A. Scriabine of the Interior Department staff, who conducted the interview.

Dollars Saved in Greenhouse Project

An estimated $4,000 was saved by the end of January due to the increased effort to conserve energy at the Arboretum's Greenhouse.

Winfried Schubert, Coordinator of Operations, began the fuel conservation project in September, installing a combination of energy savers that has really paid off.

By the time the cold weather arrived, plastic air-caps had been installed to insulate one Greenhouse, and a plastic ceiling to retain heat was hung in the other Greenhouse.

Also, an alarm system was installed to indicate electrical malfunctions and temperature losses.

During the winter months, tours are given through the Greenhouse on Wednesdays between 1:30 and 3:30 p.m.

Winter work: Pipefitter Frank Truitt, helmeted against the cold, measures a solar collector before welding a pipe connection on the Plant Science Building.

THE CARY ARBORETUM
of
THE NEW YORK
BOTANICAL GARDEN

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